



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2013-0937; Directorate Identifier 2013-CE-029-AD]

RIN 2120-AA64

Airworthiness Directives; Diamond Aircraft Industries GmbH Airplanes

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for certain Diamond Aircraft Industries GmbH Models DA 42 NG and DA 42 M-NG airplanes. This proposed AD results from mandatory continuing airworthiness information (MCAI) originated by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as the failure of the alternator indication system to indicate warning when one alternator is inoperative. We are issuing this proposed AD to require actions to address the unsafe condition on these products.

DATES: We must receive comments on this proposed AD by **[INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

ADDRESSES: You may send comments by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: (202) 493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE, Washington, DC 20590.

- Hand Delivery: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE, Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this proposed AD, contact Diamond Aircraft Industries GmbH, N.A. Otto-Straße 5, A-2700 Wiener Neustadt, Austria, telephone: +43 2622 26700; fax: +43 2622 26700 1369; email: airworthiness@diamond-air.at; Internet: <http://www.diamond-air.at>. You may review copies of the referenced service information at the FAA, Small Airplane Directorate, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call (816) 329-4148.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating it in Docket No. FAA-2013-0937; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (telephone (800) 647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Mike Kiesov, Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4144; fax: (816) 329-4090; email: mike.kiesov@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2013-0937; Directorate Identifier 2013-CE-029-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory,

economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD because of those comments.

We will post all comments we receive, without change, to <http://regulations.gov> in Docket No. FAA-2013-0937, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Discussion

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued AD No.: 2013-0224, dated September 19, 2013 (referred to after this as “the MCAI”), to correct an unsafe condition for the specified products. The MCAI states:

During maintenance troubleshooting of the DA 42 NG alternator indication system it has been discovered that, with one alternator inoperative, the system did not give a warning indication as described in the Airplane Flight Manual.

Subsequent investigation results showed that the voltage regulator warning circuit, which is part of the engine, monitors Bus Voltage and is the only trigger for the alternator fail annunciation. As a result, one alternator may fail but the related voltage regulator does not trigger the alternator fail annunciation as the voltage is being held at the regular level by the second alternator on board.

The remaining generating system indication for the pilot is unaffected. The ampere-meter is indicating a load on each alternator and in case of a Low Voltage condition a caution message will be displayed.

This condition, if not corrected, could lead to an undetected loss of one engine alternator and reduced capability of the electrical generating power system, possibly impairing safe continuation of the flight.

Prompted by this event, Diamond Aircraft Industries (DAI) introduced at airframe level an additional independent alternator fail caution trigger by using the G1000 ampere-meter signals. The trigger is set once an alternator provides less than 5A and thus indicates electrical power supply failure to the ship system.

DAI issued Mandatory Service Bulletin (MSB) 42NG-003/12 providing instructions for installation of the Secondary Configuration Card Part Number (P/N) 010-12074-02 “Additional ALTN FAIL trigger” with system software P/N 010-00670-10 applicable for all DA 42 NG and DA 42 M-NG aeroplanes.

In addition, model DA 42 M-NG now incorporates an output of the GEA 71 to activate the alternator fail relay. DAI issued Mandatory Service Bulletin (MSB) 42MNG-006 to provide instructions for installation of that additional control cable P/N D62-2510-97-00-SB.

For the reasons described above, this AD requires installation of the Secondary Configuration Card P/N 010-12074-02 “Additional ALTN FAIL trigger” and System Software P/N 010-00670-10 for all DA 42 NG and DA 42 M-NG aeroplanes and installation of GEA Alternator fail control cable P/N D62-2510-97-00-SB on certain model DA 42 M-NG aeroplanes.

This AD also prohibits installation of System Software prior to P/N 010-00670-10.

You may examine the MCAI on the Internet at <http://www.regulations.gov> by searching for and locating it in Docket No. FAA-2013-0937.

Relevant Service Information

Diamond Aircraft Industries GmbH has issued Mandatory Service Bulletin No. MSB 42NG-003/12; Mandatory Service Bulletin MSB 42MNG-006; and Work Instruction WI-MSB 42MNG-006, all dated July 8, 2013. The actions described in this service information are intended to correct the unsafe condition identified in the MCAI.

FAA’s Determination and Requirements of the Proposed AD

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to our bilateral agreement with this State of Design Authority, they have notified us of the unsafe condition described in the MCAI and service information referenced above. We are proposing this AD because we evaluated all information and determined the unsafe condition exists and is likely to exist or develop on other products of the same type design.

Costs of Compliance

We estimate that this proposed AD will affect 26 products of U.S. registry. We also estimate that it would take about 2 work-hours per product to comply with the basic requirements of this proposed AD. The average labor rate is \$85 per work-hour. Required parts would cost about \$115 per product.

Based on these figures, we estimate the cost of the proposed AD on U.S. operators to be \$7,410, or \$285 per product.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, section 44701: General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This proposed regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

- 2. The FAA amends § 39.13 by adding the following new AD:

Diamond Aircraft Industries GmbH: Docket No. FAA-2013-0937; Directorate Identifier 2013-CE-029-AD.

(a) Comments Due Date

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to Diamond Aircraft Industries GmbH Models DA 42 NG and DA 42 M-NG airplanes, all serial numbers certificated in any category, except those that have Supplemental Type Certificate (STC) SA02725NY (http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgstc.nsf/0/286A29A0C46D66048625764900624649?OpenDocument&Highlight=sa02725ny) incorporated.

Note 1 to paragraph (c) of this AD: STC SA02725NY uses a different electrical system architecture and the unsafe condition addressed in this AD does not apply to that system.

(d) Subject

Air Transport Association of America (ATA) Code 24: Electric Power.

(e) Reason

This AD was prompted by mandatory continuing airworthiness information (MCAI) originated by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as failure of the alternator indication system to indicate warning when one alternator is inoperative. We are issuing this proposed AD to prevent the undetected loss of one engine alternator, which could result in reduced capability of the electrical generating power system.

(f) Actions and Compliance

Unless already done, do the following actions as specified in paragraphs (f)(1) through (f)(3) of this AD, including all subparagraphs:

(1) For all DA 42 NG airplanes: Within 12 months after the effective date of this AD, install Secondary Configuration Card part number (P/N) 010-12074-02 “Additional ALTN FAIL trigger” and System Software P/N 010-00670-10 following the Accomplishment/Instructions section of Diamond Aircraft Industries GmbH Mandatory Service Bulletin No. MSB 42NG-003/13, dated October 11, 2013; or the Accomplishment/Instructions section of Diamond Aircraft Industries GmbH Mandatory Service Bulletin No. MSB 42NG-003/12, dated July 8, 2013.

(2) For DA 42 M-NG airplanes, serial numbers (S/Ns) 42.339, 42.MN001 through 42.MN0026, and all S/Ns modified through Optional Service Bulletin (OSB) 42-081, using Work Instruction (WI) OSB-42-081 up to Revision 1 inclusive: Within 100 hours time-in-service after the effective date of this AD or within 12 months after the effective date of this AD, whichever occurs first:

(i) Install GEA Alternator fail control cable P/N D62-2510-97-00-SB following the Instructions section of Diamond Aircraft Industries GmbH Work Instruction WI-MSB 42MNG-006, dated July 8, 2013, as specified in the Accomplishments/Instructions section of Diamond Aircraft Industries GmbH Mandatory Service Bulletin No. MSB 42MNG-006, July 8, 2013; and

(ii) Install Secondary Configuration Card P/N 010-12074-02 “Additional ALTN FAIL trigger” and System Software P/N 010-00670-10 following the Accomplishment/Instructions section of Diamond Aircraft Industries GmbH Mandatory Service Bulletin No. MSB 42NG-003/13, dated October 11, 2013; or the Accomplishment/Instructions section of Diamond Aircraft Industries GmbH Mandatory Service Bulletin No. MSB 42NG-003/12, dated July 8, 2013.

(3) For all airplanes: As of the effective date of this AD, do not install on any airplane System Software prior to P/N 010-00670-10.

(g) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) **Alternative Methods of Compliance (AMOCs):** The Manager, Standards Office, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. Send information to ATTN: Mike Kiesov, Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4144; fax: (816) 329-4090; email: mike.kiesov@faa.gov. Before using any approved AMOC on any airplane to which the AMOC applies, notify your appropriate principal inspector (PI) in the FAA Flight Standards District Office (FSDO), or lacking a PI, your local FSDO.

(2) **Airworthy Product:** For any requirement in this AD to obtain corrective actions from a manufacturer or other source, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they are approved by the State of Design Authority (or their delegated agent). You are required to assure the product is airworthy before it is returned to service.

(h) Related Information

Refer to MCAI European Aviation Safety Agency (EASA) AD No.: 2013-0224, dated September 19, 2013; Diamond Aircraft Industries GmbH Optional Service Bulletin OSB 42-081/1; Diamond Aircraft Industries GmbH Work Instruction WI-OSB 42-081, Rev. 1, both dated December 23, 2010; Diamond Aircraft Industries GmbH Optional Service Bulletin OSB 42-081; and Diamond Aircraft Industries GmbH Work Instruction WI-OSB 42-081, Rev. 0, both dated March 17, 2010, for related information. You may examine the MCAI on the Internet at <http://www.regulations.gov> by searching for and locating it in Docket No. FAA-2013-0937. For service information related to this AD, contact Diamond Aircraft Industries GmbH, N.A. Otto-Straße 5, A-2700 Wiener Neustadt, Austria, telephone: +43 2622 26700; fax: +43 2622 26700 1369; email:

airworthiness@diamond-air.at; Internet: <http://www.diamond-air.at>. You may review copies of the referenced service information at the FAA, Small Airplane Directorate, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call (816) 329-4148.

Issued in Kansas City, Missouri, on October 30, 2013.

Earl Lawrence,
Manager, Small Airplane Directorate,
Aircraft Certification Service.

[FR Doc. 2013-26571 Filed 11/05/2013 at 8:45 am; Publication Date: 11/06/2013]